IN THE CLAIMS

1. (original) A data transmission system for transmitting packet data from an Internet Protocol (IP) host comprising:

an IP layer;

a network layer adaptable for coupling to a plurality of workstations by an intermediary of an IP network, wherein said IP host is coupled to said IP network via a layer 2 network, said layer 2 network interfacing said IP network with a set of routers;

a network dispatcher, said network dispatcher coupled to said IP network and operable for receiving all incoming data flows from said workstations and dispatching them to said cluster of hosts;

a monitoring device, said monitoring device monitoring the information defining availability of said routers; and

a broadcasting device, said broadcasting device operable for broadcasting said router availability information to each host of said cluster of hosts via said network dispatcher.

2. (original) The data transmission system according to claim 1, wherein at least one monitoring device is incorporated in one of said IP hosts in said cluster of IP hosts.

3. (original) The data transmission system according to claim 1, wherein said monitoring device sends, periodically, a unicast ARP request to candidate routers, said candidate routers selected from said set of routers.

4. (original) The data transmission system according to claim 2, wherein said monitoring device sends, periodically, a unicast ARP request to candidate routers, said candidate routers selected from said set of routers.

5. (previously presented) The data transmission system according to claim 3, wherein said unicast ARP request sent to all candidate routers is sent on a periodic basis between 1 and 10 seconds.

6. (previously presented) The data transmission system according to claim 4, wherein said unicast ARP request sent to all candidate routers is sent on a periodic basis between 1 and 10 seconds.

7. (previously presented) The data transmission system according to claim 1, wherein said broadcast device sends a MAC level broadcast indicating a MAC address of said requested router and said router availability information.

8. (original) The data transmission system according to claim 7, wherein said router availability information is said MAC address of an available router that has answered.

9. (previously presented) The data transmission system according to claim 8, wherein said IP hosts update their ARP table when said IP hosts receive said MAC address of a requested router.

10. (previously presented) The data transmission system according to claim 7, wherein said router availability information is a default value of said MAC address of an unavailable router.

11. (previously presented) The data transmission system according to claim 10, wherein said IP hosts update their ARP table by removing said MAC address of a router when said router is determined to be unavailable.

12. (previously presented) The data transmission system according to claim 11, wherein said router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from said monitoring device.

13. (previously presented) The data transmission system according to claim 12, wherein said router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from said monitoring device.

14. (previously presented) A method of selecting a router by an IP host in a data transmission system transmitting packetized data from said IP host having at least an IP layer and a network layer to a plurality of workstations by the intermediary of an IP

network and wherein said IP host is coupled to said IP network via a layer 2 network interfacing said IP network by a set of routers, comprising the method steps of:

sending periodically a unicast ARP request to all candidate routers, said candidate routers selected from said set of routers; and

transmitting to all IP hosts instructions to update their ARP table with router availability information.

15. (previously presented) The method according to claim 14, wherein router availability information is a MAC address of said candidate router when said candidate router is available and has answered.

16. (previously presented) The method according to claim 15, wherein said IP hosts update their ARP table when said IP hosts receive said MAC address of said candidate router.

17. (previously presented) The method according to claim 14, wherein said router availability information is a default value of a MAC address of a candidate router.

18. (previously presented) The method according to claim 15, wherein said IP hosts update their ARP table by removing a MAC address of a router when said router is determined to be unavailable.

19. (previously presented) The method according to claim 17, wherein said candidate router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from a router monitoring device.

20. (previously presented) The method according to claim 18, wherein said candidate router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from a router monitoring device.

21. (currently amended) A computer program product embodied in a machine readable medium, including a programming method for selecting a router by an IP host in a data transmission system transmitting packetized data from said IP host having at least an IP

layer and a network layer to a plurality of workstations by the intermediary of an IP network and wherein said IP host is coupled to said IP network via a layer 2 network interfacing said IP network by a set of routers comprising, a program of instructions for performing the method steps of:

sending periodically a unicast ARP request to all candidate routers, said candidate ~~routes~~ routers selected from said set of routers; and

transmitting to all IP hosts instructions to update their ARP table with router availability information.

22. (previously presented) The computer program product according to claim 21, wherein router availability information is a MAC address of said candidate router when said candidate router is available and has answered.

23. (previously presented) The computer program product according to claim 22, wherein said IP hosts update their ARP table when said IP hosts receive said MAC address of said candidate router.

24. (previously presented) The computer program product according to claim 21, wherein said router availability information is a default value of a MAC address of a candidate router.

25. (previously presented) The computer program product according to claim 22, wherein said IP hosts update their ARP table by removing a MAC address of a router when said router is determined to be unavailable.

26. (previously presented) The computer program product according to claim 24, wherein said candidate router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from a router monitoring device.

27. (previously presented) The computer program product according to claim 25, wherein said candidate router being requested is considered unavailable when it has not answered three monitoring requests in a sequence from a router monitoring device.